

SUB
D3
CONT.

B1
CONT.

- (e) protoporphyrinogen oxidase enzymes;
- (f) uroporphyrinogen decarboxylase enzyme;
- (g) putative uroporphyrinogen decarboxylase enzyme;
- (h) porphobilinogen synthase enzyme;
- (i) hydroxymethylbilane synthase enzyme;
- (j) glutamate-1-semialdehyde 2,1-aminomutase enzyme;
- (k) glutamate tRNA ligase enzyme;
- (l) a glutamyl-tRNA reductase enzyme[;
- (l) Mg-chelatase enzyme; and
- (m) ferrochelatase enzyme].

2. (Amended) The substantially purified nucleic acid molecule according to claim 1, wherein said nucleic acid molecule comprises a nucleic acid sequence selected from the group consisting of [SEQ ID NO: 1 through SEQ ID NO: 677] SEQ ID NOS: 586, 590, 594, 596, 597, 599, 600, 601, 604, and 605.

Please add the following claim:

- 10. The substantially purified nucleic acid molecule according to claim 1, wherein said nucleic acid molecule comprises a nucleic acid sequence having between 100% and 90% identity with a sequence selected from the group consisting of SEQ ID NOS: 586, 590, 594, 596, 597, 599, 600, 601, 604, and 605. --

SUB
D4
B2

Adg
Adg